

Fishing on the Southern Brazil: environments and social contexts

Abstract

This proposal aims to reflect on the fisherman's way of life in the extreme South Brazil. For decades the socio-anthropology of fishing has cemented the "caičara" of the southeastern coast and the Amazonian riverine as the identities of the Brazilian fisherman. The different environments, territories and materialities point to a distinct fisherman's way of life for the South Brazilian coast - between Santa Marta Cape/SC and Chui/RS. To this end, an environmental characterization will be presented accompanied by a review of the production of fishing socio-anthropology and, finally, the ethnographic works will provide the data for the interpretation of the fisherman's way of life in the extreme south of Brazil.

Keywords: fishing, fishermen, environment, territory, materiality

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Introduction

The Southeast and South sectors of the Brazilian coast have clear and distinct geomorphological characteristics, such as estuaries, tectonically controlled delta river valleys, and extremely wide sedimentary coastal plains.

The Southeast sector stretches from Cabo Frio, in Rio de Janeiro State, to Santa Marta Cape, in Santa Catarina State. It is a geomorphological compartment whose main characteristic is the presence of the Serra do Mar, comprised by granite-gneiss crystal basis reaching altitudes higher than 1.000 m. Its scarps extend to the sea forming rocky promontories alternated between erosive hill sides and tectonically controlled hollows. In this sector the occurrence of coastal plains, independent from the river support, starts to be seen, although the other type can be seen as well. The multiple and/or simple lagoon-barrier systems and the regressive coastal line - sand dunes formed parallel to the beach - plains are filled with mangroves. The region of Laguna, in Santa Catarina state, marks the southern limit of mangrove area in the Brazilian coast.¹⁻³

The South sector of the Brazilian coast extends from the Santa Marta Cape, in Santa Catarina, up to the Chui stream, in Rio Grande do Sul State, at the farthest south limit of the national territory. The sector is characterized by a wide coastal plain, 700km long and up to 120km wide, where a multiple and complex system of sand barriers retains a gigantic lagoon system (Patos and Mirim Lagoons) and a series of other waterbodies both isolated or interconnected to the sea through narrow and shallow channels. In this sector, marshes (instead of mangroves), occur in the banks of estuarine portions of lagoon bodies and large dune fields can be seen over the sandplains. From Santa Marta Cape to Tramandaí, in Rio Grande do Sul, the sandplains are narrower and limited by the Serra Geral which reaches the ocean in the region of Torres, a limit between the states of Santa Catarina and Rio Grande do Sul.¹⁻³ The northern coast of Rio Grande do Sul is "adorned" by a group of lagoons that extend for 100km from Torres up to Tramandaí, squeezed between basaltic foothills and the sea. They are connected by narrow channels which drain the river systems towards the sea, justifying the name assigned by the fishermen in the region: the northern coast's "rosário de lagoas". From Tramandaí up to Arroio Chui, the rocky foothills move away from the coast and the plains widen significantly, reaching their internal limit in the Escudo

Sul-Rio-Grandense and Uruguayan, 120km away from the sea (Figure 1).⁴

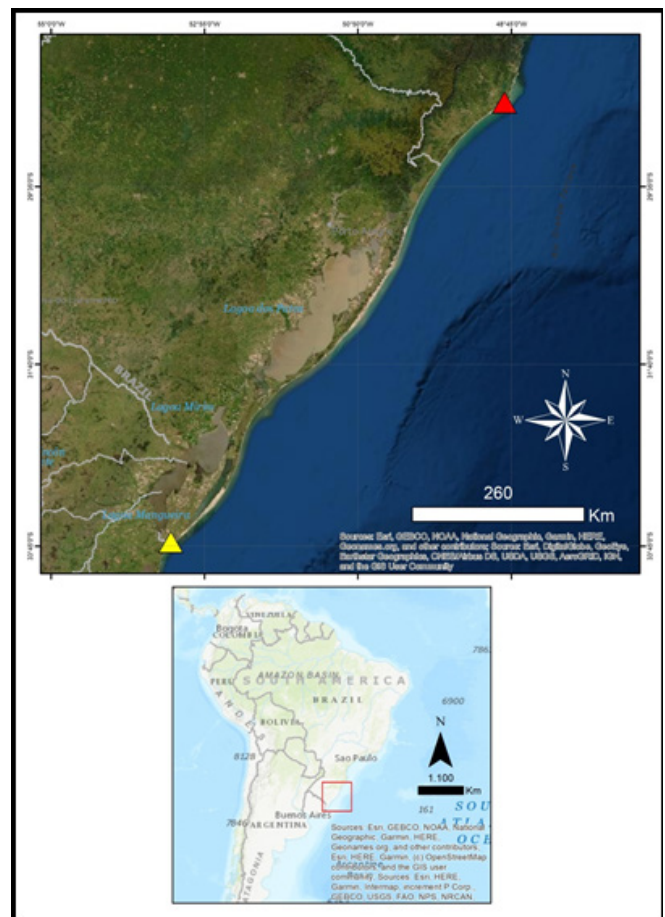


Figure 1 Regional map showing the research area. [Santa Marta Cape – red triangle; Chui stream – yellow triangle].

This article aims to debate on how these different geomorphological landscapes are translated into firmly distinct landscapes and territorialities.⁴ Explored fishing as a social cohesion element among

the indigenous fishing populations that took up the Brazilian coast since the Middle Holocene to the present day. The theoretical bibliographic basis used started from fishing socio-anthropology based on,⁵⁻¹⁶ where fishing was dichotomized between the small non-industrial fishing, or *caïçara*, and motorboat industrial fishing. *Caïçara* - Traditional populations that intersperse their activities seasonally between fishing and agriculture - fishing as defined in the fishing socio-anthropology of the 1980s, 1990s and 2000s seems restricted to coasts of states situated between Espírito Santo and Santa Catarina, where the transition between the world of brackish waters and salty waters is controlled by the “*boca da barra*” (local term used in order to indicate the place where the river reaches the lagoon or the sea), as seasonally transposed by local fishermen.

In archaeology, the first attempt to correlate archaeological data to fishing socio-anthropology derives from,¹⁷ where the shell mounds (*sambaquis*) on São Paulo coast were analyzed. Other works on fishery at the same region reappeared only two decades later, where the shell mound societies were already seen as maritime societies and the cultural frontiers in the Southeastern coast set the stage for that proposal.^{18,19} The *sambaquis* of Santa Catarina's coastal plains emerged as hot spots of the spread of fisheries societies since 4000 years ago as stated in Klokler et al (2010) and Gaspar et al (2011). In Rio Grande do Sul state those sites only appeared after 4000 years ago, indicating the late specialization of those societies in fishing.

For each place, a fishing and a fisherman

Since the 1970's Beck²⁰ pointed out the need for a located definition of what is understood by non-industrial fishing, or artisanal fisherman. In fact, it already seems evident that strategies, habits, choices, practices and knowledge vary locally on a coast with continental proportions such as the Brazilian one. Indeed, since the end years of the 19th century, non-industrial fishing became the focus of specific, although sporadic, studies.²¹⁻²⁴ passionately depicted an idyllic fisherman, master of the sea and patron of acknowledge filled with empiricism and efficiency. Still in the first half of the 20th century Mussolini²⁵ synthesizes “the fisheries” of the Brazilian coast and develops a historic review of social elements that comprise the practices, techniques and knowledge disseminated in different maritime regions of the country. Amidst the 1960's and specially the 1970's, the studies spread out to almost the entirety of the Brazilian coast.^{20,6,12,26,27,13,16} Henceforth, the fisherman is depicted as a peasant of the sea, a survivor whose lifestyle was pressed between the farming calendar of the small rural family producer and the growing mechanization of the commercial industrial fishing. The following decades mark the emergence of the fishing socio-anthropology and consolidate a research field in which approaches and themes multiply throughout the country.^{5-11,14,15}

Silvano³⁰ highlights that: “despite this database, non-industrial fishing is not well-known in Brazil”. It is notorious the concentration of studies that describe in detail the lifestyle, knowledge, struggles, disputes, techniques and identities of what has been widely described as traditional fisherman/non-industrial *caïçara* and traditional fisherman/non-industrial Amazonian fisherman (or riverine).

In the extreme south of Brazil, between Santa Marta Cape and Chuí the realities found have very local characteristics. It seems to us that, from Santa Catarina down, there is a gradual conceptual distance of the *caïçara* non-industrial fisherman, over and above the geographic character. Yet, in the north part of Santa Catarina Island (Florianópolis City),³¹ identifies an intrinsic relationship between the coastal maritime fisherman and the agricultural productive system.

There, the mullet (*Mugil* sp.) fishing season gathers temporary crews and the social relationships are rather ephemeral. Historically, fishing in the Santa Catarina Island has this characteristic whether it comes from the waves of Vincentian settlers, in 17th century, or the late arrival of Azoreans in 18th century. In the final decade of 19th century, Germans and Italians started their settlements in the island and then the fishing and agriculture calendars continued to dictate the pace of family subsistence through the “small market production”.¹¹ It was only with the growing real estate pressure of 1950's and dispute for coastal seas on account of leisure tourism that the fisherman saw himself kept from his plantation lands and fishing national territories, inevitably going towards the industrial fishing in the “outside sea” (*mar de fora*). Such occurrence is considered a local and *sui generis* historical process.

In the south of Brazil,^{32,33} carried out studies in the Ibiraquera lagoon, in the town of Ibiraquera, Santa Catarina state. In both studies, socio-cultural and ecological aspects of the communities of lagoon fishermen were described. Through ideas of shared territory management, and resilience of fishing systems,³⁴ centered in the ecological and holistic interpretation of fishermen, the works highlighted the importance of local ecological knowledge for management of fishing activities in the lagoon and its vicinity.

Still in Santa Catarina State, more specifically on the border with Rio Grande do Sul State,³⁵ developed a study on sea fishing in the town of Passo de Torres. Following an ethnobiological approach, the authors described social and ecological aspects of some communities in the region. Through interviews and a brief ethnographic study, the researchers pointed out the diversity of local practices, especially when observing the fishing spots, for example, its activity areas in the river or the sea. It is also emphasized the concern with the management of the fishery resource as the authors mention that the fishermen always report the fish decline in the region.

On the North coast of Rio Grande do Sul State fishing is conducted within a local economic logic, where fish production is held within family structures the sale occurs at their own residences and attached structures.³⁶ In the limnic environments of water surfaces and rivers that comprise the “*rosário de lagoas*” of the north coast, the small boats, no bigger than six meters long, either with motorization or bamboo oars (*varejões*) frame the local landscape. In these environments of sociability, the fishermen take over the spaces, build their territory and their knowledge through the experiences they have with objects, beings and places. The fishing calendar on the north coast of Rio Grande do Sul State is dictated by the wind changes from season to season, conditioning a periodic salinity (seasonal), completely changing the behavior of species (to be caught) and fishermen as well. The wind direction also changes the navigation conditions on the surface of the lagoons, forcing the fishermen to change the type of boat they use, such as large wooden canoes pushed by bamboo oars on the shallows and swamps - whose V-shaped bottoms act as a longitudinal keel providing stability and keeping the wind direction (during long periods or even days). This reality is well expressed in the following sentence: “with the wind the lagoon turns into a sea”.³⁷ During calm periods (or days), when the lagoon is mirrored, the lighter alloy boats with flat bottom, are used for long journeys and fishing in deeper areas. The motorization of these boats helps in the trawling of longer and, naturally, heavier nets.³⁸

On the mouth of the Tramandaí Lagoon a very peculiar type of fishing has historical backgrounds and indicates the temporal continuity of these cultural practices. Roquette-Pinto³⁹ describes the “catfish fishing industry” in the coastal village of Tramandaí during

the first decade of 20th century. It consisted basically of intensive fishing for salting and “exporting”, via Porto Alegre, to Rio de Janeiro where, at times, it was sold as “imported codfish”. The fishing was carried out through the “amendment” (*emenda*), a team of fifteen fishermen distributed in four wooden canoes opening the purse seine nets (*redes de cerco*) to which the school of fish conducted due to the noise of hitting the oars on the water surface. All fishing takes place in the lagoon and the estuary; therefore, it is not characterized as sea fishing.

On the central part of the Rio Grande do Sul State’s coast there is a peculiar local frame of fishing lifestyle. In the Peixe Lagoon, today a protected National Park, the maritime calendar rules the seasonal fishing activities. With the constant connection to the sea, the Peixe Lagoon (which actually is a small lagoon), located between the Patos Lagoon peninsula and the sea, is an adequate environment for shrimp breeding. They enter the brackish lagoon in the summer and take advantage of the narrow water line which assures the adequate temperature for reproduction. During this period, the fishermen focus the fishing activities on the labor of capturing other crustaceans, whose profitability is advantageous. However, it consists of an incidental opportunity. Fishing, in fact, is characterized by beach fishing, with long stand-by nets (*redes de espera*) dispersed perpendicularly to the beachline where mullet (*Mugil* sp.), *papa-terra* (*Menticirrhus* sp.) and mainly the Whitemouth croaker (*Micropogonias furnieri*) are the targets. Rarely a black drum (*Pogonias cromis*) falls into these almost kilometer long trawls to remind the fishermen of the peak period of this kind of fishing which has been in decline for decades. The trawls are pulled in joint efforts or by motor-operated traction, but the sociability and the cronyism are still elements easily found in the Peixe Lagoon. There is also longline fishing in the Peixe Lagoon, areas of great dispute for space which are explored all year long.⁴⁰

Further down to the south in the interior of the mouth of the Patos Lagoon, in São José do Norte city, fishing stands out historically as the economic basis for the region – whose industrial fishing started only in the 1980s. There, boats are basically wooden made and adapted to fishing within the brackish waters of the channel and estuary or even in the inner fresh waters of the lagoon. Although some fishermen often practice the “outside sea” (*mar de fora*) fishing, they still maintain a calendar more linked to the old and traditional inland fishing which most often takes place in the summer to take advantage of the shrimp fishing. The *artepesca* - Term used by fishermen in Barra do João Pedro – Maquiné, RS – refers to fishing materials that “go into the water and catch the fish” - used in the estuary is the stand-by nets (*rede de espera*), stretched with bamboo sticks, similar to the fishing in the region of Laguna, in Santa Catarina. The so-called “sweet coast” of the towns of Pelotas, São José do Norte and Rio Grande is intensely explored for this purpose where the sticks work as attached markers of a cultural landscape of great vitality, locally known as “*paliteiro*” (a lot of sticks).

The large lagoon system Patos-Mirim has a significant and differentiated number of environments and therefore, of fishermen. Similar to the “*rosário de lagoas*” of the northern coast, fishing in the Mirim Lagoon is characterized by a fisherman with no relations to the sea. Fishing in Mirim⁴¹ is framed by a simple technology navigation where motorboats or small oar canoes (*caícos*) are equipped with stand-by nets (*redes de espera*) and sticks for the fishing of *traíra* (*Hoplias* sp.), *jundiá* (*Rhamdia* sp.), *pintado* (*Pseudoplatystoma* sp.) and pejerrey (*Odontesthes* sp.). Still in the 1960s and 1970s the salting was part of the production chain. Cronyism is not a rule but fishing in kinship groups and, mostly, family-centered is. Another similarity between fishing in Mirim and the state’s north is the reminiscence,

until a few decades ago, of the traditional cotton sail canoes and the use of fishing lines made with vegetable fiber, called “*linhas urso*”, replaced only in the 1960s by outboard motor and nylon. Also, Roquete-Pinto³⁹ mentions the same navigation in Tramandaí in the first years of the 20th century.

Territory and fishermen. Following inshore fishing in southern Brazil

During decades the socio-anthropological literature understood the existence of a fisherman lifestyle ruled by productive aspects, observing questions concerning the division of labor, the seasonality centered in the duality of fishing and agriculture, and the duality between traditional and mechanical fishing and their characteristics and impacts in the organization of the communities^{5-11,29,14,15} Later, the symbolic aspects became a recurring theme in the characterization of the fishermen’s way of life, themes such as appropriation of the sea area, the marking and use of the fisheries, the importance of knowledge and the role of the master as a center figure,^{42,14} were addressed in order to structure, along with the productive aspects, a general idea of the fisherman and his lifestyle.

However, as mentioned above, when disregarding the making of the environment where the fishermen live, this generalized image focuses, mostly, on the feature of the *caíças* of the Brazilian southeast, disregarding the local character of each community and the dialogical relationship between people and places. Ingold⁴³ says that the environment is always a relative term, as there are no beings (humans and non-humans) and materials without environment, therefore, there is no environment without beings and materials. For him, the place is the world that exists and takes on a meaning in relation to each being. Thus, it develops with and along each being. The environment is a world that develops continuously for its inhabitants. Describing it is telling stories that flow, mix and interact all the time.^{44,45} Based on this, it can be said that in order to understand each fishing community and its respective lifestyle, it is necessary to carefully observe the environment where they live in, which in this case, is known as territory.

As Adomilli suggests⁴⁰, relying on Duarte¹² fishing is characterized as an element that “holds” the group’s social identity as it expresses more than a condition of existence/subsistence, but a lifestyle that encompasses the other areas of social life. Fishing is an element of social cohesion and belonging.

“It is important to highlight that the practice of non-industrial fishing involves a single action for the environment in ecological and symbolic terms. With this in mind, it is observed that the appropriation and representation of the space carried out by the group is a central aspect in its social organization, seen here as evaluative framework that implies the notion of belonging to the place where they live and work, based on the relationship with the natural habitat and the conditions of the exploration of it.”⁴⁰

The socio-anthropology of Brazilian fishing presents definitions that partially include this notion of territory, considering it as a place of social reproduction and the making of identities.^{5,11,12,14,16} According to,⁴³ it is interesting to add to this definition the relational constitution that is established between the territory, beings and materials. The territory is the place where the beings (fishermen and animals) live and conduct their lives through the materials and, at the same time, the people and the beings form the places (territories) through the relations with the materials. All in all, this dialogic relationship leads to the following statement: territory and fishermen mutually form themselves and, therefore, to understand fishing, it is necessary to

observe the environments and fishermen in regional and local scales, in order to establish a greater proximity between the place and the people.

The distinct coastal formation, described in the beginning of the text, and their implications on fishing become more evident when we observe the seasonality and its consequences for fishermen from the south coast of Brazil. Adomilli^{40,46} and Silva^{36,38} show that the issue of seasonality has a well delimited specificity in relation to studies on fishing in southeastern Brazil. Different from the seasonal change of activities between fishing and agriculture, characteristic of the *caíçaras*, the fishermen in the far south of Brazil maintain their fishing activity, but change their fishing spots (*pesqueiros*). The vast plains of southern Brazilian coast, are very susceptible to winds which leads the fishermen to establish a distinct relation to their territories. For instance, during fall and winter, the restriction of mobility and consequent use of fishing areas less exposed to winds is common.³⁷ In these seasons, the higher atmospheric instability coupled with small vessels (6 meters long with outboard motors of up to 25hp), leads to the search for fishing areas in swamps, rivers or beach banks. Similarly, there may be some changes of fishing areas due to certain species, such as the shrimp season in the Peixe Lagoon,⁴⁰ in which the fishermen go to brackish waters for the fishing of the crustacean and, after this period, seek new places to fish.

Generally speaking, what changes initially are the relations to the territory itself. Based on this, the practices common to the fishermen that live in such territory, are changed, either in navigation, search for other fishing areas or variation of the behavior fish species to be captured. These modifications arise from the fisherman's perception of his own territory. When noticing all phenomena, the fisherman reorganizes himself within the place and, through his materials, reorganizes his activities, calendars and daily routine.³⁸

Another aspect to be highlighted is the practical dimension of the fishermen's life along these places. As mentioned, when identifying the place and knowing it, the fisherman engages in the fishing activity. Maldonado's statement¹⁴ makes it clear that:

The notion of place is not only important to develop the fishing experience in what could be called as its emic dimension, but also as the analytical perspective, since talking about space is talking about something wide, immense, indivisible, like the sea or the sky, when we call it infinite. The place, the local existence of phenomena both in the physical space as well as in the social space is what grants essence, meaning and transcendence. It is locally that we position ourselves and it is locally that things happen.

The author's claim supports the idea of local establishment of fishing but also assumes that these local "events" have their materiality. The "things that happen" are mediated by materials that permeate the fishing way of life.⁴⁰ For example, presents the different vessels used for distinct fishing places. For the coastal/sea fishing, it is common the usage of larger and more stable vessels, adequate for the rough sea in the region. For lagoon fishing, fishermen use smaller vessels, sometimes with no motor, because of the calmer conditions of the lagoon waters and lower incidence of wind, which enable the use of this type of material for movement. In a recent article,⁴⁷ go even further in this relational and local character of fishing through a broad breakdown of the art of building vessels in the region of the Patos Lagoon estuary. In the correlation between the constructive practices, the narratives of fishermen and their places, the authors point out exactly how the distinction between the environments is a prime concern in the art of constructing vessels.

In the aspect of fishing materials³⁸ points out the same phenomenon, also adding the relationality of *artepescas* (materials) with the fishing spots (*pesqueiros*), such as in the preferential use of longline during summer since, according to fishermen, due to the clear water in the months between January and March, the bait is more easily visualized by the fish, simplifying the capture of certain species. In contrast, the nets are meshed materials in which the fish are expected to get "entangled" and, therefore, their use is more adequate in turbid or mixed waters because of the winds.^{48,38}

These examples, connected to the Ingoldian relational approach⁴³⁻⁴⁵ between environment, people and materials, reaffirm the need to understand the way of life of the fishermen in their regional contexts. These contexts can be understood by the characterization of territories in their ecological, material, historical, productive and symbolic aspects. This territory characterization is fundamental to understand the fisherman and his materiality and, from the already mentioned idea of relationality, it is possible to escape from the essentialization of the figure of the generic fisherman also already criticized in some publications.⁶⁻¹¹

Conclusion

It is understood that, due to a certain environment, fishermen in the south coast of Brazil differ in their practices, connections to the places, and form their identities intertwined with their territories. The debate presented here emerges from the relational idea between the fisherman and the place, comprising the mutual constitution of both parts. One may add to these historical processes registered by Roquette-Pinto (ano), who describes the peculiarities of fishing in the region of Tramandaí. Together, environment, fisherman and historical processes conduct distinct types of fishing, intrinsically related to territory, weather, seasonality, local knowledge and material practices, in conjunction with places. Retracing the understanding of³¹: non-industrial fishing needs to be understood locally.

Fishing in the coastal lagoons of Rio Grande do Sul takes place in narrow water lines where the temperature and seasonality are crucial to find the schools of fish. The proximity with the bottom of the water body produces breakings in the wind conditions, causing quick vector changes of origin quadrants (when the wind "turns around") "roughening" the water mirrors into a troubled inner sea. The specific nature of the knowledge built locally leads to the dissociation of these coastal fishing and the open sea.

When understanding the fisherman in his habitat, all fishing articulations and peculiarities unfold into their more specific contexts, for instance, the different calendars, species caught, fishing materials, other seasonality impacts and especially in the way the fishermen mutually link to the territory and materials. As Silva and Gaspar sustain⁴⁹, when understanding fishing based on the relationship between territory, fishermen and materials, it might be possible to invert the classical proposition by Diegues¹¹ – *fishing builds societies* – to "*fishermen and materials developing the fishing*". The purpose of this suggestion is to revisit the basic work in the communities through ethnographies, invest on the research with the fishermen and the places, understand the role of the materials in constituting the way of life of the fisherman and then, setting good comparisons and regional characterizations about the fishing communities in Brazil.^{50,51}

Thus, to conclude, many challenges remain for the understanding of fishing and fishing communities in the South of Brazil. Among them we highlight the following: studies that historicize the fishing practices and knowledge in order to understand the contribution of different populations and ethnic groups; the need for more

ethnographic studies with the purpose of broadening the knowledge on the matter in the region and to create interpretative proposals closer to the material reality of fishing and the communities; deepen the practical understanding of fishing next to the communities studied in order to understand the entanglement of relationships between territories, fishermen, fish, waters, winds and weather and, lastly; strictly local studies that put thought on the techniques, gestures and materials involved in each fishing.

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Conflicts of interests

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